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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/705,289	02/06/2001	Robert Angelo Mercuri	P-1017	4708

7590

12/02/2002

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EXAMINER

BAHTA, ABRAHAM

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/705,289

Applicant(s)

MERCURI ET AL.

Examiner

Abraham Bahta

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AS-11

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 6-10 and 16-20 , drawn to an article, classified in class 428, subclass 408.
- II. Claims 11-15, drawn to an assembly, classified in class 429, subclass 44.

The inventions are distinct, each from the other because:

Inventions Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention of Group I (claims 6-10 and 16-20) has separate utility such as for forming gaskets, seals and gas diffusion layers, metal fixtures, mandrels and high temperature applications such as engine exhaust seal ring. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with James Cartiglia on 11/08/02 a provisional election was made without traverse to prosecute the invention of Group I, claims 6-10 and 16-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-15 are withdrawn from further consideration by the examiner, 37 CAR 1.142(b), as being drawn to a non-elected invention.

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Claim Rejections - 35 USC § 112

Claims 6 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 16 indicate the requirements for the graphite flake to be "sized no more than about 30% by weight +80 mesh". This is not clear. The Examiner has taken the position that 30% by weight of the graphite flake does not pass through an 80 mesh screen. Clarification and correction is requested.

Drawings

The Examiner notes Applicant's remarks regarding the drawings. Accordingly, the figure originally referred to as Fig. 4 which is the sole remaining figure in the application should be labeled Fig. 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-10 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mercuri (USP 6,017,633) in view of Mercuri (USP 6,087,034).

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Mercuri '633 teaches a flexible graphite sheet made by treating graphite flakes with intercalating solution. See col. 1, line 63 - col. 2, line 14. The intercalated flakes may be exfoliated which involves heating the flakes to an elevated temperature. The exfoliated graphite may then be compressed into flexible graphite sheet. See col. 2, lines 56-58. Mercuri in different embodiments teaches the first batch graphite flakes may be at least 80% by weight sized 20x50 mesh and a second batch of smaller sized natural graphite flakes sized at least 80% by weight 50 by 80 mesh. In addition, the first batch and second batch may be mixed together to provide from about 5% to 25% by weight of unexfoliated intercalated natural graphite flakes in the mixture. The reference suggests the flexible graphite sheet may be roll-pressed (col. 3, lines 31-39) and may be used as a sealing gasket. See col. 2, lines 69-65.

Mercuri '633 does not require flakes sized no more than about 30% by weight +80 mesh; however, the reference at col. 3, lines 40-49 suggests the use of finer than 80 mesh sized unexfoliated intercalated natural graphite flakes. Although this results in a concentration of such particles near the surface of the bed of large exfoliated graphite particles and also results in a flake with excess retained water content which results in a sheet which loses expansion capability, the fact remains the use of the claimed size of flake is known, and there are no requirements in the claim for any particular water content, expansion capability or shelf life.

Regarding claims 8, Mercuri '633 at col. 4 Example III teaches the treated, intercalated natural graphite flake may be water washed and dried to about 1% weight water before expansion.

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Regarding claims 9-10, Mercuri 034 teaches channels may be provided in a flexible graphite sheet. See col. 3, lines 34-49. It would have been obvious to the skilled artisan to provide channels to the graphite sheet of Mercuri '633 as suggested by Mercuri '034 in order to provide additional additives to the graphite sheet.

Claim Rejections - 35 USC § 103

Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mercuri '633 in view of Mercuri '034.

Mercuri '633 teaches a sealing gasket (col. 5, Example 5) which is made from a flexible graphite sheet which may be roll-pressed (col. 3, lines 31-39) and made by treating graphite flakes with intercalating solution. See col. 1, line 63 - col. 2, line 14. The intercalated flakes may be exfoliated which involves heating the flakes to an elevated temperature. The exfoliated graphite may then be compressed into flexible graphite sheet. See col. 2, lines 56-58. Mercuri in different embodiments teaches the first batch graphite flakes may be at least 80% by weight sized 20x50 mesh and a second batch of smaller sized natural graphite flakes sized at least 80% by weight 50 by 80 mesh. In addition, the first batch and second batch may be mixed together to provide from about 5% to 25% by weight of unexfoliated intercalated natural graphite flakes in the mixture.

Mercuri '633 does not require flakes sized no more than about 30% by weight +80 mesh; however, the reference at col. 3, lines 40-49 suggests the use of finer than 80 mesh sized unexfoliated intercalated natural graphite flakes. Although this results in a concentration of such

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particles near the surface of the bed of large exfoliated graphite particles and also results in a flake with excess retained water content which results in a sheet which loses expansion capability the fact remains the use of the claimed size of flake is known, and there are no requirements in the claim for any particular water content, expansion capability or shelf life.

Regarding claims 18, Mercuri '633 at col. 4 Example III teaches the treated, intercalated natural graphite flake may be water washed and dried to about 1% weight water before expansion.

Regarding claims 19 and 20, Mercuri '034 teaches channels may be provided in a flexible graphite sheet. See col. 3, lines 34-49. It would have been obvious to the skilled artisan to provide channels to the graphite sheet of Mercuri '633 as suggested by Mercuri '034 in order to provide additional additives to the graphite sheet.

Any inquiry concerning this communication should be directed to Abraham Bahta at telephone number (703) 308-4412. The Examiner can normally be reached Monday-Friday from 11:30 AM -8:00 PM (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor Deborah, Jones, can be reached on (703) 308-3822.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

A. Bahta



11/07/02



DEBORAH JONES
SUPERVISORY PATENT EXAMINER